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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,423	03/30/2001	Michael A. Popp	SSM488US	1226

7590 07/27/2006
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EXAMINER

MANOHARAN, VIRGINIA

ART UNIT PAPER NUMBER

1764

DATE MAILED: 07/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/806,423

Applicant(s)

POPP ET AL.

Examiner

Virginia Manoharan

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1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-14,16,17,19,27,30-32,35-41,43-50 and 52-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-14,16-17,19,27,30-32,35-41,43-50 and 52-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1, 4-14, 16-17, 19, 27, 30-32, 35-41, 43-50 and 52-54 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a "bubble evaporator or flash evaporator" (page 3, lines 9-10), does not reasonably provide enablement for the now claimed evaporator. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practise the invention commensurate in scope with these claims. There are numerous evaporators such as, for examples only, a falling film evaporator, a multieffect evaporator, a short path evaporator and etc., but the above evaporators, e.g., were not contemplated by the claimed invention as the specification is limited to a flash evaporator or bubble evaporator.

Claims 1, 4-13, 27, 30-32 35- 41 and 52 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a). Claim 5 is at odds with the claim from which it depends, i.e., claim 1. Claim 1 recites "said means for maintaining the ratio comprising a recycling line connected between the multi-stage condenser and a pump installed in said recycling line .."; whereas, claim 5 recites "said means for maintaining said ratio comprises at least one membrane pump for withdrawing condensate from the condenser" which is inconsistent therewith. [A dependent claim incorporates every features of the claim from which it depends and cannot change nor orient the limitation already recited in the independent claim].

- b). The used of a slash such as "water/alcohol" in claim 40 is improper.
- c). Claim 48 is an incomplete claim as it depends on a cancelled claim 18.

Claims 19 and 45-48 are objected to because of typographical error such as "-%"

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14, 16, 27, 39 and 50 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Higashi et al (4,600,477) .

Higashi is deemed to anticipates or renders obvious the claimed process for concentration of a solution comprising: placing said solution under vacuum in an evaporator to form an overhead product and a bottoms product; pressurizing and transporting said overhead product to a multi-stage condenser; condensing at least a portion of said overhead product in said multi-stage condenser into a liquid condensate; and recycling at least part of said liquid condensate to said evaporator as broadly claimed in claims 14 and 50. See cols. 8-10 (claims). The claimed "to maintain a

substantially constant ratio of more volatile to less volatile constituents in the solution in the evaporator" is deemed to be naturally or inherently occurring in the method/process of Higashi. Note e.g., Fig. 2 wherein, like the claimed invention, the condensate (21) is shown recycled via pump (23) to the distilling column (4).

Claims 17, 19, 40-41 and 45-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higashi et al (4,600,477).

The ethanol content e.g., of at least 20 vol.%; and the ratio being constant claimed e.g., in claim 19 and claim 17 are deemed to be a result-effective-variables which ordinarily are within the skilled of the art.

Claims 43-44 and 53-54 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1, 4-13, 27, 30-32, 35-38 and 52 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 1st & 2nd paragraph, set forth in this Office action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


- a). Youngner teaches urging the liquid from the collection chamber to the condenser.
- b). Peter et al discloses a process for separating mixtures.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to V. Manoharan whose telephone number is (571) 272-1450.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


VIRGINIA MANOHARAN
PRIMARY EXAMINER
ART UNIT 1331764
7/22/06